

REMARKS

Reconsideration and allowance of the above identified application are requested.

Petition for Extension in Time for Reply

Applicant petitions the Commissioner of Patents and Trademarks to extend the three month time for reply to the Office action mailed May 5, 2004, for one additional month to September 5, 2004. A check that includes the fee for the requested extension is enclosed.

Information Disclosure Statement

The attached IDS includes documents cited in a International Search Report mailed to the Applicant on April 15, 2004 by the International Searching Authority in regards to a PCT application based on the above-mentioned application. A check that includes the fee for submitting the IDS is enclosed.

Specification.

The paragraph that starts on page 2, line 30 is amended to clarify the claimed invention within the scope of the original application.

35 U.S.C. § 103 Claim Rejection.

The Applicant traverses the rejection of Claims 1 and 2, as amended, as obvious under 35 U.S.C. § 103 (a) because the references, Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly cited in the Examiner's Office Action, teach fat substitutes comprising either soluble fibers, particularly in a crystalline form, or insoluble particulate fiber. The Applicant's invention on the other hand discloses a fat substitute comprising dietary fiber gel having non-particulate amorphous insoluble fiber.

The References Do Not Teach the Claimed Invention

There is nothing disclosed in Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly that teaches the modification of the references suggested by the Examiner. Obviousness depends on the differences between a claimed invention and the prior art. 35 U.S.C. § 103(a). The establishment of obviousness requires that the prior art must teach or suggest all the limitations of the claimed invention. *In re Royka*, 490 F.2d 981, 984-85 (CCPA 1974). The

Applicant traverses the rejection because nothing in Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly teaches all the elements and limitations of the Applicant's claimed invention.

The Applicant's invention claims cookies made with an emulsified liquid shortening composition comprising dietary fiber gel. Fiber, which is typically a solid, can be processed to produce a wide variety of products. The dietary fiber gel produced from a highly refined fiber, as described in U.S. Pat. No. 5,766,662 which is incorporated by reference into the Applicant's invention disclosure, is an insoluble dietary fiber. As disclosed at Col. 3, line 58 to Col. 4 line 36 of the '662 patent the "gel products . . . contained in the insoluble fraction . . . from the first stage . . . are subjected to [a] second stage . . . [of] treatment. Following the second stage . . . solids are again separated from the liquids . . . [and] the recovered solids consist of cellular debris in the form of a hydrated gel. The gel may be dried." Although insoluble materials are not soluble, insoluble materials can be dispersed. Fortunately, as noted at Col. 4, lines 37-44 of the '662 patent, dietary fiber gel "is readily dispersible." Further, at Col. 4, lines 64-66 of the '662 patent, "the fiber particles are completely disrupted and exist as a cellular debris" and thus dietary fiber gel can be characterized as non-particulate and amorphous. Thus, dietary fiber gel comprises non-particulate amorphous insoluble dietary fiber. None of the cited references teach shortening or fat substitute compositions comprising dietary fiber gel comprising non-particulate amorphous insoluble dietary fiber.

For example and as noted by the Examiner, Young et al at Col. 3, lines 7-12 teach "an emulsion composition . . . that has an aqueous phase containing water and konjac . . . and a lipid phase." In light of Stone, which teaches at Col. 2, line 28 and as noted by the Examiner that [k]onjac . . . is a soluble dietary fiber," clearly the combined references teach fat substitutes that comprise soluble dietary fiber gel and not insoluble dietary fiber. Similarly, El-Nokaly does not teach a fat substitute composition comprising insoluble dietary fiber because at Col. 4, lines 53-62 "[the] fat substitute compris[ses] . . . a stable polymeric liquid crystal," wherein at Col. 7, lines 5-6, El-Nokaly teaches that "the liquid crystal polymers must also be sufficiently soluble." Further, El-Nokaly at Col. 7, lines 36-51, teaches that "[t]he fat substitute is made by preparing a polymeric liquid crystal from . . . a polymeric polysaccharide, [and T]he polysaccharide useful in the present invention are soluble." Clearly, El-Nokaly teaches soluble polysaccharides, for example cellulose and cellulose-derivative polymers, and not insoluble dietary fiber.

Separately, El-Nokaly at Col. 14, lines 47-48, teaches the identification of polymeric liquid crystals by the “presence of a characteristic ‘texture’ pattern observable under polarized light microscopy.” Clearly, El-Nokaly teaches a liquid crystal form of the polymeric polysaccharide and not an amorphous dietary fiber.

In addition, Abboud et al, and Loh et al teach insoluble particulate fiber inherently having intact cellular structure. Abboud et al at Col. 2, lines 1-11, teach “[t]he fat replacement system . . . includes . . . vegetable fiber.” Further, Abboud et al at Col. 3, line 66 to Col. 4, line 7 teach “[t]he vegetable fiber . . . is an insoluble fiber, . . . [and t]he particle of the fiber have an average particle size of between about 10 and about 200 microns, preferably between 10 and 100 microns.” Clearly, Abboud et al teach an insoluble particulate fiber and not a non-particulate insoluble dietary fiber. Similarly, Loh et al at Col. 2, line 58 to Col. 3, line 5, teach “compositions comprising . . . edible insoluble material which is a dietary fiber, which is desirably at least partially microparticulated . . . [wherein t]he fiber component . . . will generally have a particle size distribution of from about 0.1 μm to about 50 μm .” Clearly, Loh et al also teach an insoluble particulate fiber and not a non-particulate insoluble dietary fiber.

The References Lack Any Suggestion to Combine

There is nothing disclosed in Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly that teach the modification of the references suggested by the Examiner. Obviousness requires that the suggestion to make the claimed invention must found in the prior art. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). Such a suggestion is lacking in the cited reference. Even if the reference fully taught the Applicants invention, the Applicant traverses the rejection because nothing in Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly affirmatively suggests making the cited combination.

Young et al in view of Stone and El-Nokaly are directed to fat substitutes that comprise dietary fibers compounds that are either soluble, preferably in liquid crystal form, and Abboud et al and Loh et al are directed towards the use of insoluble fiber particulates, while the Applicant’s invention is directed toward insoluble amorphous non-particulated dietary fiber gel. The new dietary fiber gel compound utilized in the Applicant’s invention, as described in U.S. Pat. No. 5,766,662, which is incorporated by reference into the Applicant’s invention disclosure, is an

insoluble dietary fiber that is produced by highly refining fiber. The cited references do not teach or suggest utilizing an insoluble amorphous non-particulated dietary fiber gel compound.

For example at Col. 4, lines 25-27, Young et al teach that “the presence of konjac as a gelling agent in the aqueous phase of the emulsion.” When discussing water-in-oil emulsions Young et al at Col. 9, lines 23-27, points out “the aqueous phase is dispersed throughout the continuous aqueous phase, preferably as small gelled droplets . . . i.e. the konjac-containing aqueous phase.” Clearly, Young et al teach a water soluble compound that is dissolved in a dispersed water phase, and do not teach or suggest the dispersion of an insoluble dietary fiber gel compound.

Separately, El-Nokaly at Col. 4, lines 26-28, teaches that “polysaccharide liquid crystals . . . allow substantial amounts of polysaccharides to be incorporated into fat.” Because of the important solubility characteristics of liquid crystals, El-Nokaly at Col. 14, lines 47-48, teaches the identification of polymeric liquid crystals by the “presence of a characteristic ‘texture’ pattern observable under polarized light microscopy.” El-Nokaly’s liquid crystals teachings are contrasted with Applicant’s use of amorphous fiber gel as described in the ‘662 patent at Col. 4, lines 64-66 which states “scanning electron photographs . . . reveal that fiber particles are completely disrupted and exist as a cellular debris.” Clearly, El-Nokaly teaches a liquid crystal form of the polymeric polysaccharide for preferred solubility characteristics, and does not teach or suggest preferred solubility characteristics for an insoluble dietary fiber gel having an amorphous structure.

Both Abboud et al and Loh et al teach the use of fiber particulates. Abboud et al at Col. 1, lines 51-52 teach “a particulate fat replacement system,” and at Col. 3, line 65, to Col. 4, line 7, teach “fiber used in the present invention is an insoluble fiber . . . having an average particle size of . . .” Loh et al at Col. 3, line 66, to Col. 4, line 1, teach “microparticulated insoluble material such as an edible fiber is an important component of the fat mimetic compound of the present invention.” Further, one skilled in the art would know that particulate fiber inherently has an intact cellular structure. This is contrasted with the Applicant’s use of insoluble dietary fiber gel having “fiber particle [that] are completely disrupted and exist as a cellular debris” as taught in the ‘662 patent at Col. 4, lines, 64-66. Clearly, Abboud et al and Loh et al teach fat substitutes comprising fiber particles that inherently have intact cellular structure, and do not


teach or suggest the use of insoluble fiber gel that comprises completely disrupted particles that exists as a cellular debris.

Applicant has amended Claims 1 and 2 to clarify the foregoing distinction. In view of the amendments to Claims 1 and 2, and above arguments, Applicant requests that the rejections of Claims 1 and 2 as being obvious under 35 U.S.C. § 103 (a) be withdrawn.

The cited fat substitutes of Young et al in view of Stone, Abboud et al, Loh et al, and El-Nokaly comprise dietary fiber compounds that are different from the Applicant's invention, such that the Applicant's fat substitute is a compound that differs from the cited fat substitutes. In Young et al in view of Stone, the fat substitute does not comprise insoluble dietary fiber. In El-Nokaly, the fat substitute does not comprise amorphous insoluble dietary fiber. The fat substitutes in Abboud et al and Loh et al does not comprise non-particulate insoluble dietary fiber having completely disrupted particles that exists as a cellular debris. However, the Applicant's fat substitute comprises an insoluble amorphous non-particulated dietary fiber gel. The Applicant's fat substitute is a different compound than taught in the cited reference. Because the Applicant's fat substitute is a different compound than known fats or fat substitutes, the amount of fat substitute that replaces fat in the cookie formulation, and the resulting solids content of the cookies, can be different depending on the desired taste, flavor, and texture such that the use of any known cookie formulation would be unobvious.

Applicant believes that the amended patent application is now in condition for allowance. Accordingly, the Applicant respectfully requests that a Notice of Allowance be issued in this case. The Examiner is invited to contact the undersigned by telephone or facsimile if the Examiner believes this would advance the prosecution of the matter.

Respectfully submitted,



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